

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0020] on page 6 with the following rewritten paragraph.

[0020] FIGS. ~~7A-7D~~ 7A-7C illustrate an exemplary technique for downsampling an image with a first resolution.

Please replace paragraph [0098] spanning pages 18 and 19 with the following rewritten paragraph.

[0098] Figure 7A illustrates an exemplary technique for downsampling the image with a first resolution. Specifically, the image with a first resolution is downsampled by employing a 6 x 6 low pass convolution filter. This filter is effective in removing aliasing caused by high frequencies. The full 6 x 6 convolution filter is illustrated in Figure 7B, which is a combination of the X direction filter of Figure 7C and the Y direction filter of Figure ~~7D~~7C. In order to reduce processing operations, the present invention decomposes the full 6 x 6 convolution filter kernel into an X direction filter and a Y direction filter. Accordingly, the original resolution image is initially low pass filtered in the X direction 750. Next, the original resolution image is downsampled in the X direction 755 and then low pass filtered in the Y direction 760. Finally, the output of the low pass filtering operation in the Y direction is downsampled in the Y direction 765. The output of this downsampling process can be input into an identical downsampling processing block if lower resolution imagery is desired. Since the identification of clouds and manmade activity detection is performed using large scale processing, the original resolution image at a first resolution is downsampled twice.

Please replace paragraph [0146] spanning pages 39 and 40 with the following rewritten paragraph.

[0146] In the multi-resolution approach of the present invention, the coarse resolution imagery, i.e., the original image downsampled to a third resolution, will be between 16 and 32 meters, while the medium resolution imagery, i.e., the original image downsampled to a second resolution, is between 4 and 8 meters resolution.

Figure 26 illustrates the large scale processing performed to identify bodies of water. If the original image is not at the proper resolution then the image will be downsampled as illustrated in processing block 2610. Since the processing illustrated in Figure 26 operates using large scale processing, the original resolution image will be downsampled twice to achieve an image at a third resolution, i.e., the coarse resolution image. It will be recognized that the downsampling performed can employ the same techniques described above in connection with Figures ~~7A-7D~~7A-7C. In addition, although Figure 26 illustrates a separate downsampling processing block, the downsampled image produced by the cloud identification processing module in processing block 610 can be employed instead of performing a new downsampling on the original image to produce the coarse resolution image at a third resolution. Using the downsampled image parallel edges are identified by processing block 2620.